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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/520,687 | 03/07/2000 | John Dung-Quang Ly | 14013-33US | 9101 |

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LAW OFFICES OF IMAM
111 N. MARKET STREET, SUITE 1010
SAN JOSE, CA 95113

| EXAMINER | |
|---|---|
| WON, MICHAEL YOUNG | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2155 | |

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Supplemental Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/520,687 | LY, JOHN DUNG-QUANG | |
| | Examiner | Art Unit | |
| | Michael Y Won | 2155 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *13 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-6 and 8-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1-6 and 8-26 are pending with this action.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6 and 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodimer et al. (US 6,003,078 A) in view of Lee (US 5,657,257 A).

*INDEPENDENT:*

As per claim 1, Kodimer teaches of a network device assembly (see Fig.2) employed in a communication system (see Fig.1 and col.2, lines 17-19) comprising: a plurality of network devices (see Fig.1) capable of communicating network information (see abstract), through a packet switching network (see col.2, lines 2-5), to a technical support center (see col.1, lines 56-57: "service organization" and col.2, lines 2-5) operated by technical support staff (see col.13, lines 26-28: "network administrator"), said plurality of network devices coupled to said packet switching network through an interface line (see Fig.1 and col.3, lines 8-11), each of the plurality of network devices

including one or more hardware subsystems and one or more software subsystems and for monitoring the status of the hardware and software subsystems (implicit) included therein and when a problem occurs either with respect to one or more of the hardware and software subsystems of a particular one of the plurality of the network devices, the particular network device sends a first message to the technical support center notifying the technical support center of the problem (see abstract and col.1, line 63 to col.2, line 5) without interruption to the operation of the network device [implicit: According to the reference, Kodimer teaches that the network device, "NIB" is a network interface board which comprises it's own processor, memory, and instruction sets (see col.4, lines 23-40), for the purpose of communicating with devices and making responsive decisions (see col.4, lines 11-22), therefore, NIB performs it's operational functionality when the device that the NIB is monitoring triggers an event, thus inherently uninterrupted. The problem of the subsystems does not affect the operation of the network device, but rather affects the network device to respond], said network device assembly including a computer register for indicating the status of the hardware and software subsystems immediately before the problem occurs (see col.12, line 52-col.13, line 2).

Kodimer does not explicitly teach wherein the indicating the status is of all the subsystems. Lee teaches of indicating the status of all the subsystems (see col.3, lines 59-62). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lee within the system of Kodimer by implementing indicating the status of all the subsystems within the network device assembly because Lee teaches that such implementation can minimize power

consumption by cutting off power to devices that are not operational (see abstract and col.3, lines 62-66).

As per claim 12, Kodimer teaches a network device (see Fig.2) for use in communication with a technical support center (see col.1, lines 56-57: "service organization" and col.2, lines 2-5) operated by a technical support staff (see col.13, lines 26-28: "network administrator"), the technical support center being in communication with the network device (see Fig.1) through a packet switching network (see col.2, lines 17-19 and col.3, line 65 to col.4, line 2), comprising: an interface line coupling said network device to the packet switching network (see Fig.1 and col.3, lines 8-11); one or more hardware subsystems (see Fig.4); one or more software subsystems (inherency; see col.1, lines 28-32; and col.12, lines 10-12); means for monitoring the status of the hardware and software subsystems and said interface line (implicit: see col.4, lines 53-58) so that when a problem occurs with respect to one or more of the hardware or the software subsystems or the interface line, the network device transmits a first message to the technical support center to notify the technical support center of the problem (see abstract and col.1, line 63 to col.2, line 5) without interruption to the operation of the network device (see claim 1 rejection above); and a computer register for indicating the status of the hardware and software subsystems immediately before the problem occurs (see col.12, line 52-col.13, line 2).

Kodimer does not explicitly teach wherein the indicating the status is of all the subsystems. Lee teaches of indicating the status of all the subsystems (see col.3, lines 59-62). It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to employ the teachings of Lee within the system of Kodimer by implementing indicating the status of all the subsystems within the network device because Lee teaches that such implementation can minimize power consumption by cutting off power to devices that are not operational (see abstract and col.3, lines 62-66).

As per claims 24 and 25, Kodimer teaches a method and a computer readable medium having stored therein computer readable program code comprising instructions (see Fig.3 and col.4, line 59), for detecting a problem in a network device (see abstract; Fig.19; and col.12, lines 34-36) comprising: during the operation of the network device (see abstract), the network device communicating network information through a packet switching network to a technical support center (see col.1, lines 56-57: "service organization" and col.2, lines 2-5) being operated by a technical support staff (see col.13, lines 26-28: "network administrator"), the network device being coupled to the packet switching network through an interface line (see col.3, lines 8-11), the network device including one or more hardware subsystems (see Fig.4) and one or more software subsystems (see Fig.1); monitoring the status of the hardware and software subsystems (inherency; see col.1, lines 28-32; and col.12, lines 10-12) and the interface line (implicit: see col.4, lines 53-58); detecting the occurrence of a problem associated with one or more of the hardware or software subsystems or the interface line (see abstract; Fig.19; and col.12, lines 34-36); sending a first message to the technical support center for notification of the problem so that the technical support staff is able to diagnose the problem without interruption to the operation of the network device (see

abstract and col.1, line 63 to col.2, line 5 and claim 1 rejection above); and indicating the status of the hardware and software subsystems immediately before the problem occurs (see col.12, line 52-col.13, line 2).

Kodimer does not explicitly teach wherein the indicating the status is of all the subsystems. Lee teaches of indicating the status of all the subsystems (see col.3, lines 59-62). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Lee within the system of Kodimer by implementing indicating the status of all the subsystems within the network device problem detecting method and program because Lee teaches that such implementation can minimize power consumption by cutting off power to devices that are not operational (see abstract and col.3, lines 62-66).

*DEPENDENT:*

As per claims 2 and 14, Kodimer further teaches wherein the interface line is an Internet line (see col.1, lines 54-58) and the first message is in the form of an email message (see col.13, lines 26-28).

As per claims 3 and 15, Kodimer further teaches wherein the first message is in the form of a fax transmission (see col.1, lines 16-19).

As per claims 4 and 16, Kodimer further teaches wherein the first message is in the form of a page (see Fig.16).

As per claim 5, Kodimer further teaches including a processor for executing embedded software for monitoring the status of the hardware and software subsystems (see Fig.2, #22).

As per claims 6 and 17, Kodimer further teaches wherein the packet switching network is the Internet (see col.1, lines 54-58).

As per claim 8, Kodimer further teaches wherein the computer register includes error messages (see col.1, line 15) for identifying a particular hardware or software subsystem failure (see Fig.19 and col.12, lines 34-40).

As per claims 9 and 19, Kodimer further teaches wherein each of the plurality of network devices includes a remote diagnostic embedded process subsystem (see Fig.17), a hardware health status monitor subsystem and a software health status monitor subsystem, the remote diagnostic embedded process subsystem for communicating with the hardware health status monitor subsystem and the software health status monitor subsystem and for collecting status information provided by the software health status monitor subsystem and the hardware health status monitor subsystem and for detecting problems encountered by the hardware and software subsystems (see col.1, line 63 to col.2, line 5).

As per claims 10 and 22, Kodimer further teaches wherein the plurality of network devices is responsive to a second message generated by the technical support center for requesting further information regarding the problem (see Fig.18. steps S1801-S1806 and col.14, lines 3-5).

As per claims 11 and 18, Kodimer further teaches wherein at least one of the plurality of network devices is an access server (see abstract: "network peripheral device").

As per claim 13, Kodimer further teaches wherein the technical support staff is able to diagnose the problem without interruption to the operation of the network device (see Fig.16, #184; Fig.17; and col.10, lines 25-31).

As per claim 20, Kodimer further teaches wherein the remote diagnostic embedded process subsystem detects an error message (see col.1, line 15) prior to the transmission of the first message (see Fig.19 and col.12, lines 34-40).

As per claim 21, Kodimer further teaches wherein the remote diagnostic embedded process subsystem detects certain criteria (see col.1, lines 47-53) regarding the status of the network device prior to the transmission of the first message (see Fig.19 and col.12, lines 34-40).

As per claim 23, Kodimer further teaches wherein the network device is in communication with a user and further wherein the technical support center includes an email server (inherency) coupled to a command-formatter for communicating with a user interface, the email server for collecting the first message (see col.13, lines 26-28), the command-formatter for translating the first message into a format that is understandable to the user and the user interface for displaying information communicated between the network device and the user (see Fig.12; col.5, lines 12-22; col.6, line 61 to col.7, line 2; and col.10, lines 64-67).

3. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kodimer et al. (US 6,003,078 A) and Lee (US 5,657,257 A), further in view of Wiesenewsky (US 3,925,764 A).

As per claim 26, Kodimer further teaches wherein said plurality of network devices included memory (see Fig.2, #31 and #34) and of a remote diagnostic embedded process subsystem (see Fig.17), but Kodimer and Lee do not explicitly teach wherein the remote diagnostic embedded process subsystem is coupled to a memory monitoring subsystem for monitoring the memory of the network devices. Wiesenewsky teaches of a memory monitoring subsystem for monitoring the memory of the network devices (see col.12, lines 21-26).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Wiesenewsky within the system of Kodimer and Lee by enabling the memory monitoring subsystem for monitoring the memory of the network devices to couple the remote diagnostic embedded process subsystem within the communication system because Kodimer teaches that "condition" and "status information" is detected and obtained, respectively of the "network peripheral devise" (see abstract). Therefore, to one of ordinary skill in the art, a database or a repository constitutes a network peripheral device, and as such if a database or a repository was implemented the NIB would conform to monitoring the elements of such devices within the remote diagnostic embedded process subsystem by the network administrator.

***Response to Arguments***

4. In response to the argument regarding claims 1, 12, 24, and 25, the examiner again reiterates that Kodimer clearly teaches of detecting a problem of the network device *immediately before the problem occurs* (see col.12, line 52-col.13, line 2).

The cited area is now presented to emphasize the teachings of Kodimer: Kodimer state in col.12, line 52-col.13, line 2:

"More particularly, in step S2001, network copier 11 detects a condition for which service is required. In this context, service might include, for example, technical service and maintenance or service from a sales organization, such as a delivery of a new part. The condition might consist of an operational problem, such as a motor failure, discovered during self-diagnostic testing or during normal operations. Alternatively, the condition might consist of an event triggered by exceeding a threshold quantity of usage, such as exceeding a threshold number of pages printed without performing maintenance. Finally, the condition might be triggered by a particular user input, such as pressing a button instructing copier 11 to place a purchase order request.

In step S2002, in response to the detected condition information specifically relating the detected condition together with copier configuration and/or status information is output from copier 11 to NEB 14 via XP interface 51" (emphasis underlined).

It is obvious to one of ordinary skill in the art that when a condition such as "exceeding a threshold number of pages printed without performing maintenance", the condition is output along with other information to the NEB, and the condition is triggered such that a **failure does not occur** with the network device (in the example by Kodimer: "network copier 11"). Therefore, one of ordinary skill in the art can decisively

conclude that based on the "event trigger" the status is outputted *immediately before the problem occurs.*

Kodimer does not however, explicitly teach of indicating the status of **all** subsystems, but rather "sends only information regarding detected conditions". Newly discovered reference Lee (US 5,657,257 A) has been cited to teach the deficiencies of Kodimer (see rejection above).

Based on the arguments presented, a possible 112 issue arises because the element "indicating the status of all of the hardware and software subsystems immediately before the problem occurs" is indefinite. For example, if the status of **all** the hardware and software is indicated before the problem occurs, then one of ordinary skill in the art would conclude that the **all** the hardware and software problems occurs at relatively the same time OR that all of the only problem occurring hardware and software subsystems are indicated. Kodimer clearly teaches the latter, but the argument suggests the former. Although the former is possible, such simultaneous failure is unrealistic and unlikely. Nonetheless, the applicant is suggested to amend the claims to clearly recite the claim language.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Won

March 23, 2005

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER